Back Cast

By Ron Wilson

Their paths eventually cross in the underwater confusion of rocks, timber and hilltops swallowed by Missouri River water a half-century ago. But that's where the commonality – a shared existence behind one of the largest earthen dams in the world – of chinook salmon and paddlefish ends.

Paddlefish are native to the Missouri River System.

Chinook salmon were introduced in 1976.

Paddlefish feed by filtering tiny zooplankton from the water with their long gill rakers.

The salmon's bread and butter is rainbow smelt, also a nonnative.

Paddlefish are slow-growing and long-lived. There are paddlefish in Lake Sakakawea that are older – some have been aged by scientists at 60 years – than the average North Dakotan.

Salmon are fast-growing and short-lived. A fish that makes it to age 5 is rare.

The average weight of paddlefish is 30 pounds for males and 60 pounds for females.

The average weight of chinook salmon is 4 pounds for males and 7 pounds for females.

You could take just about any two fish species in the Missouri River System, I suppose, and come up with a list of disparities, even though the fish share the same waters and combat the same highs and lows tossed at them by nature and humans. Paddlefish and chinook salmon are not unique to such an exercise. So maybe part of the point is to simply illustrate how Sakakawea is a lake of extremes, and these two species best tell that story. Then again, it could be that paddlefish, a curious-looking fish that has been around for eons, and salmon, a madly addicting fish to some anglers, are just fun to write about.

To make things interesting, there is a bit of mystery that surrounds what biologists refer to as the Yellowstone-Sakakawea stock of paddlefish. Young-of-the-year and yearling paddlefish are caught in dip nets as they flee slow-moving boats, and are then tagged for study purposes. Biologists know fish of this age hang out in the upper end of Lake Sakakawea where zooplankton populations are greatest at certain times of the year. But when the fish reach roughly 2 years of age, they blink off the map and are not seen again until reaching sexual maturity when making spawning runs up the Missouri and Yellowstone rivers. For males that's an extended disappearing act of several years during ages 2-9; 2-15 for females.

During fall, well before spring spawning, adult paddlefish stage in Sakakawea near where the lake turns to river in northwestern North Dakota.

In spring when water temperature and spring runoff says its time, these fish move into the river to spawn, before retreating back into Sakakawea. And this is where they'll stay until it's time – it's a two-year wait for males and a three-year wait for females – to do it all over again.

For salmon in Sakakawea, the race to reach sexual maturity and procreate is a sprint rather than the paddlefish's marathon. In fall, salmon ages 2-5 migrate into the lower reservoir's back bays in waves in their futile search for places to spawn. Instead of vodka-clear streams, the fish are presented with a man-made spawning ladder that spits out a stream of water.

In the end, after spawning just once, all the salmon die. Some are artificially relieved of their milt and eggs, ingredients for future hatchery-raised generations, while others sink to the bottom of Sakakawea, or wash up on shore to be picked at by predators.

What paddlefish and salmon do share is an existence strained by years of low water. During times like these, productivity of zooplankton and rainbow smelt declines, minimizing the amount of food available. The given weight of male salmon today, for example, is half of what it was four years ago when water levels were closer to normal.

There is a sense of urgency as we wait for lake levels to climb, to inundate high and dry vegetation that will pump life into the reservoir, and swallow – and keep swallowed – smelt spawning habitat currently exposed to sun and winds.

When you think about it, there isn't a salmon alive today that has experienced a Sakakawea flush with water, home to clouds of rainbow smelt adrift in acres and acres of coldwater habitat.

Some paddlefish know better, have experienced all of Sakakawea's irregular rises and falls, considering they were around even before the dam was built.